

STUDIES ON THE AUSTRALASIAN ASCLEPIADACEAE, II* A NEW COMBINATION IN *GYMNEMA* R.BR.

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Summary

The new combination *Gymnema dunnii* based on *Marsdenia rostrata* R.Br. var. *dunnii* Maiden & Betche is made. The species is described and illustrated with notes given on distribution, habitat and conservation status.

During studies of the Australian Asclepiadaceae, it became evident that material originally described as *Marsdenia rostrata* R.Br. var. *dunnii* Maiden & Betche was referable to the genus *Gymnema*. While there is some superficial vegetative similarity to *Marsdenia rostrata*, the floral characters of this taxon are those of *Gymnema* both in the narrow sense of Huber (1983) and the broader concept favoured by Schlechter (1914).

This incorrect generic placement has been recognised by several workers (Jacobs & Pickard 1981, Williams & Harden 1981, Stanley & Ross 1986) but no attempt has been made to effect the necessary transfer. Hence, the following new combination and change of status is made.

***Gymnema dunnii* (Maiden & Betche) P.Forster, comb. et stat. nov.**

Marsdenia rostrata var. *dunnii* Maiden & Betche, Proc. Linn. Soc. New South Wales 31: 736 (1906). Type: New South Wales: Acacia Creek, McPherson Range, Dec 1905, J.L.Dunn (holo: NSW; iso: BRI AQ333081). In the original description of *Marsdenia rostrata* var. *dunnii*, Maiden & Betche (1906) incorrectly cite the type as 'Mrs. J.L. Dunew'.

Woody vine. Stems puberulent, twining, 1-1.5 cm thick; with coarsely fissured bark, corky, grey-brown, dark-brown when cut; with white latex. Leaves ovate, oblong-ovate to oblong-elliptic, apex acute to acuminate, base obtuse to cuneate, 2.5-8 cm long, 1.3-10.5 cm wide, yellowish-green to green above, paler beneath, finely puberulous on both surfaces with lateral and reticulate venation more prominent on abaxial surface. Petioles 0.6-4 cm long; 5-9 extra-floral nectaries present at midrib base of lamina. Stipules at either side of petiole base. Inflorescence an extra-axillary umbel with up to 7 flowers, 1(2) umbels per node; peduncles 0.3-1.2 cm long; pedicels 2-5 mm long, finely pubescent. Calyx 1.5-2 mm long, subacute to oblong, lobed from 1/2 to 3/4 length, sparsely pubescent externally. Corolla convolute; lobes acute to oblong, reflexed at anthesis, glabrous outside, sparsely shortly pubescent inside, 2-2.5 mm long; tube 2-2.5 mm long, shortly pubescent inside; corolline corona of thickened ridges running longitudinally down tube and alternate with lobes, densely pubescent on edges. Staminal column 2-2.5 mm long; corona consisting of small discrete tubercles at base; anthers with membranous tip, anther groove 0.9-1.1 mm long. Ovaries glabrous; stigma conical, 2-2.5 mm longer than staminal column. Pollinium ascending, without pellucid margin, oblong, golden, ca 140-150 µm long. Translator dark brown, ca 100 µm long. Caudicle without wings, ca 47 µm long. Follicles fusiform, 5-6 cm long. Seed light-brown, 7-8 mm long, 2-3 mm wide; coma white, 15-20 mm long. Fig. 1.

Specimens examined. Queensland. NORTH KENNEDY DISTRICT: Barrabas Scrub, W of Ravenswood, Apr 1943, Blake 14894 (BRI). PORT CURTIS DISTRICT: near Rockhampton, Mar 1943, Blake 14841 (BRI). BURNETT DISTRICT: Mt Perry, undated, Keys 204 (BRI); Mt Blandy, Dec 1980, Forster 532 (BRI); 4.5 km NNE of Monogorilly, Dec 1981, Forster 987 (BRI). DARLING DOWNS DISTRICT: Gladfield, undated, Gwyther 2892 (BRI), Jan 1962, Williams NSW 181362 (NSW); 5.5 km SW of Baking Board, Dec 1982, Forster 1448 (BRI); 2.5 km SSW of Gladfield, Jun 1986, Forster 2479, Bird & Grimshaw (BRI,CANB). MORETON DISTRICT: Rosewood, Dec 1886, Bailey AQ216768 (BRI), Nov 1943, Blake 15364 (BRI); near Pine Mt., Jan 1957, Blake 20084 (BRI); D'Aguilar Range, 27°15'S, 152°40'E, Apr 1972, Moriarty 914 (BRI), Aug 1972, Moriarty 963 (BRI); State Forest 309, Enoggera, Aug 1972, Moriarty 961 (BRI); Upper Brookfield, Jan 1978, Jessup 56 (BRI); Burleigh Heads National Park, Jul 1978, McDonald et al. 2202 (BRI,CANB); Worlds End Pocket, Nov 1981, Bird AQ347176 (BRI); 11 km from Croftby on White Swamp to Boonah Border Gate road, Jan 1986, Forster & Bird 2285 (BRI). New South Wales. NORTH COAST: Casino, May 1912, McAuliffe 8 (BRI,NSW); Unungar State Forest on Mt

*Continued from *Nuytsia* 6(2) (in press)

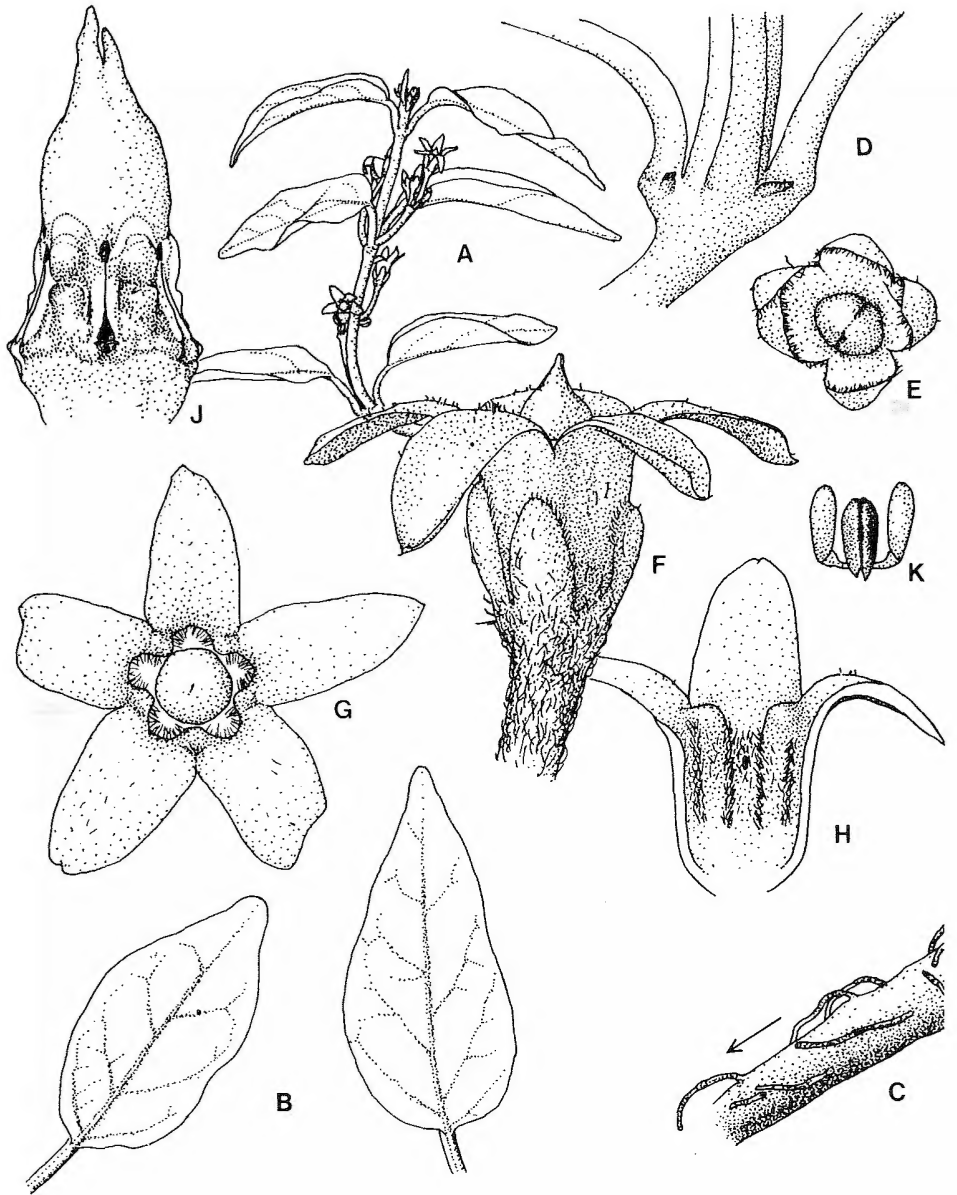


Fig. 1. *Gymnema dunnii*: A. flowering twig $\times 1 \frac{1}{3}$. B. leaves $\times 2$. C. edge of leaf, showing hairs which cover entire plant (arrow points towards leaf tip) $\times 60$. D. node, showing extra-axillary origin of inflorescence, and stipules at either side of petiole blades $\times 7$. E. calyx, showing ovaries after removal of corolla $\times 13$. F. flower, side view $\times 13$. G. flower, apical view showing hairs inside tube $\times 13$. H. transverse section of corolla showing hairy corolline corona (small dark oval in centre indicates scale and position of a translator of the pollinarium, when *in situ* on the gynostegium) $\times 13$. J. gynostegium $\times 20$. K. pollinarium $\times 75$. All from material in spirit of Forster 987.

Lindesay Hwy, between Mt Lindesay & Kyogle, Feb 1975, *Moriarty* 1646 (BRI); Glenugie Peak, near Grafton, 1964, *Hayes* NSW 181360 (NSW); Lismore, Nov 1894, *Bauerlen* 1401 (NSW); Mt Danger, NW of Sandy Hollow, Aug 1966, *Rodd* 345 (NSW). NORTHERN TABLELANDS: Acacia Ck, undated, *W. Dunn* 260 (BRI,NSW). CENTRAL WESTERN SLOPES: Bushy Hill, beside Glenbawn Dam, near Scone, Dec 1962, *Williams* 1052 (BRI), 1208 (NSW); Mt Dongal, Nov 1973, *Webster & McGillivray* 19050 (NSW); 2 miles [3.2 km] SE of Scone Experimental Stn, Mar 1960, *Story* 7068 (CANB,NSW). **Map 1.**

Habitat: *Gymnema dunnii* occurs primarily in semi-evergreen vine thickets or araucarian microphyll and notophyll vine forests (dry deciduous rainforests) on a variety of rock types from 200–700 m altitude. Plants are usually infrequent at the localities visited, usually consisting of up to a dozen large clumps (although the population 2.5 km SSW of Gladfield was extensive). The vegetation communities are usually open with high light levels and it is uncommon to encounter juveniles in heavily shaded conditions. Often the species may be found associated with other Asclepiadaceae such as *Sarcostemma australe* R.Br., *Secamone elliptica* R.Br., *Gymnema micradenium* Benth., *Marsdenia leptophylla* F.Muell. ex Benth. and species of *Parsonsia* (Apocynaceae).

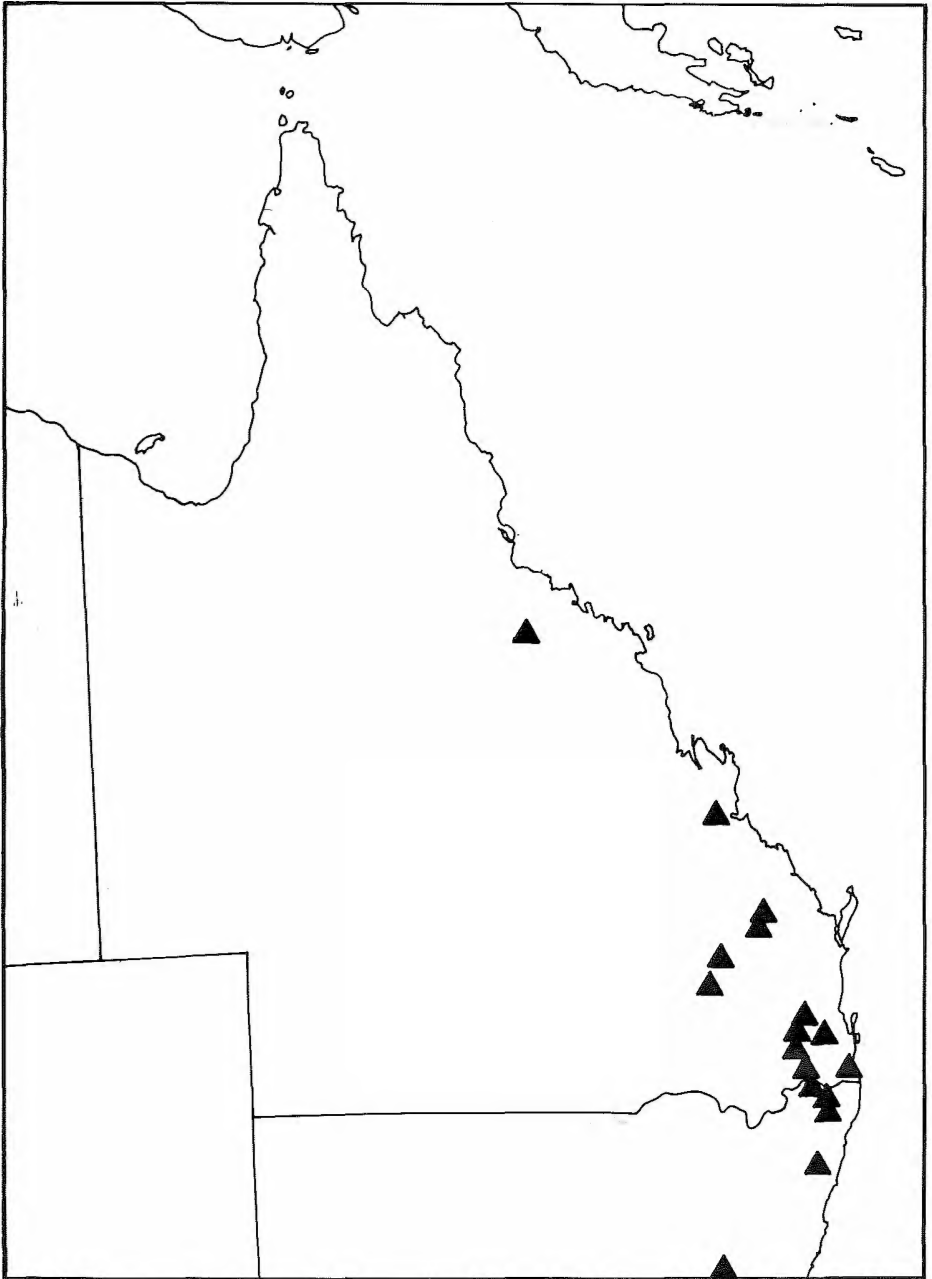
Conservation status: Given the destruction of much of the dry deciduous rainforest communities in Queensland and north-eastern New South Wales, it may be assumed that the distribution of *G. dunnii* is less extensive than in the past. The localities visited were usually regrowth remnants and unlikely to survive in the long-term. While it has been recorded from at least one conservation reserve, there does not appear to be an adequate representation throughout the species range. The plant is inconspicuous and when sterile unlikely to be collected and probably occurs at other sites within the range indicated. At this stage *G. dunnii* should not be considered endangered.

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Map. 1. Distribution of *Gymnema dunnii* based on holdings at the Queensland Herbarium.